PRIOR ART

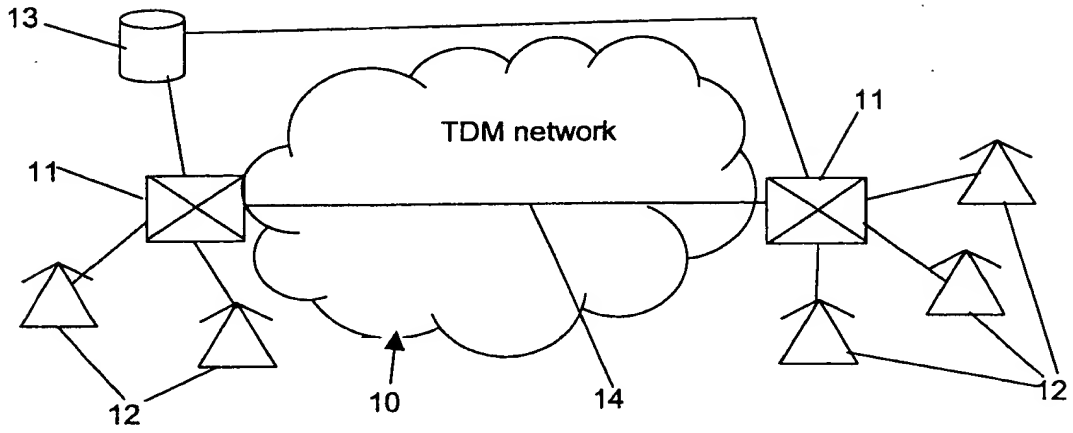



Figure 1

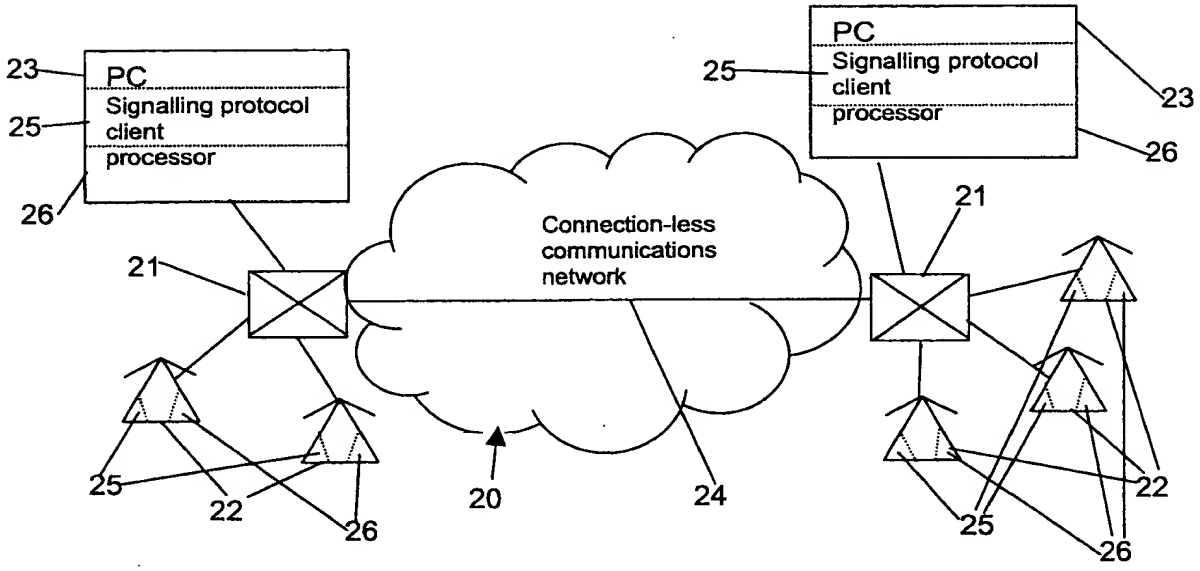



Figure 2

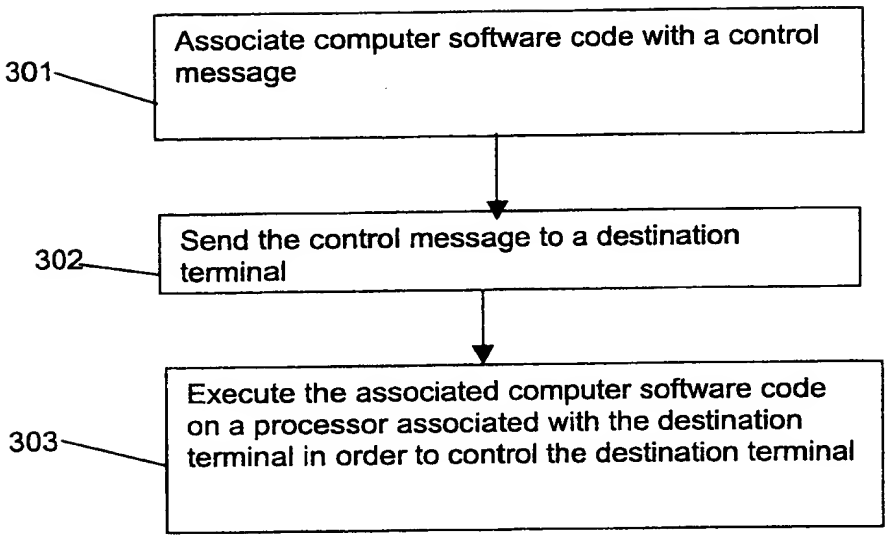



Figure 3

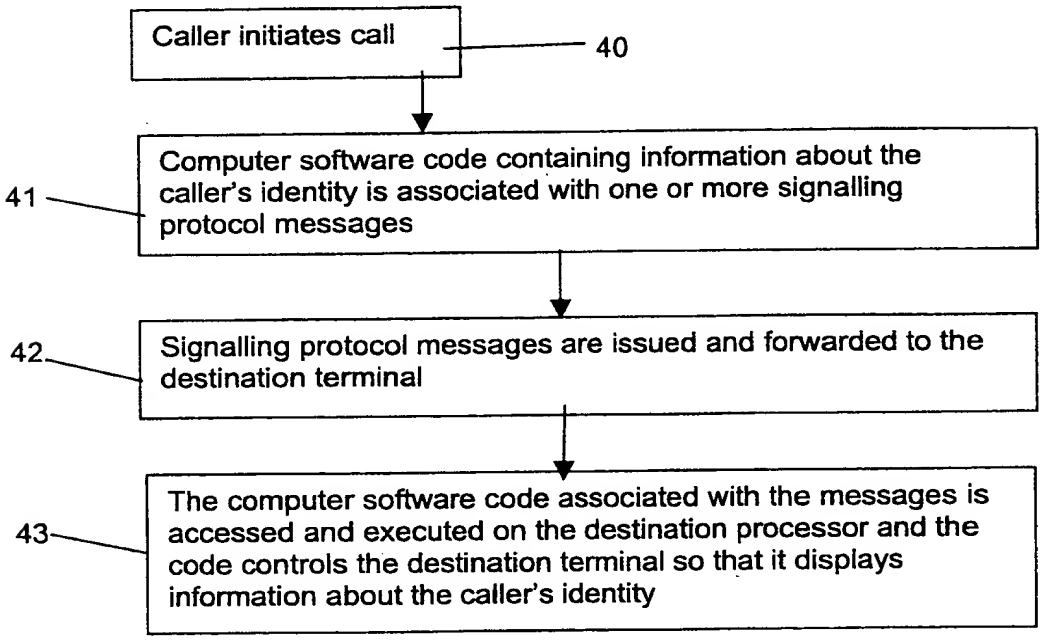



Figure 4

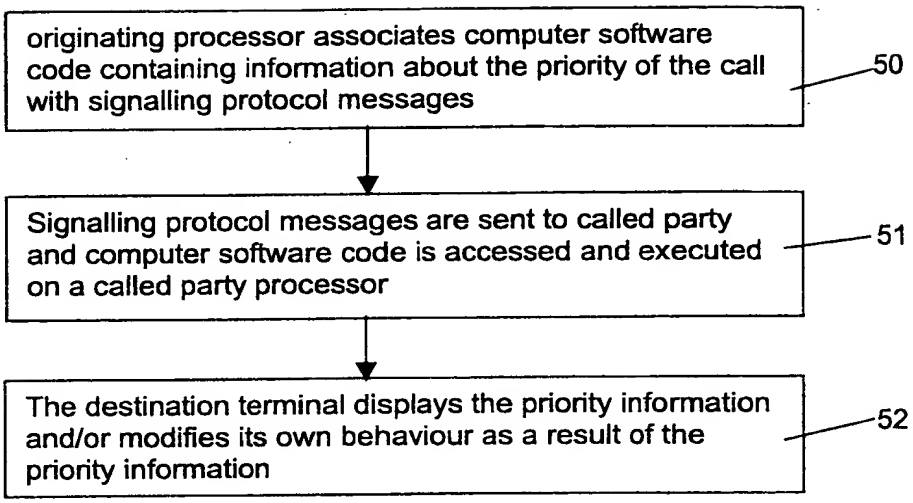



Figure 5

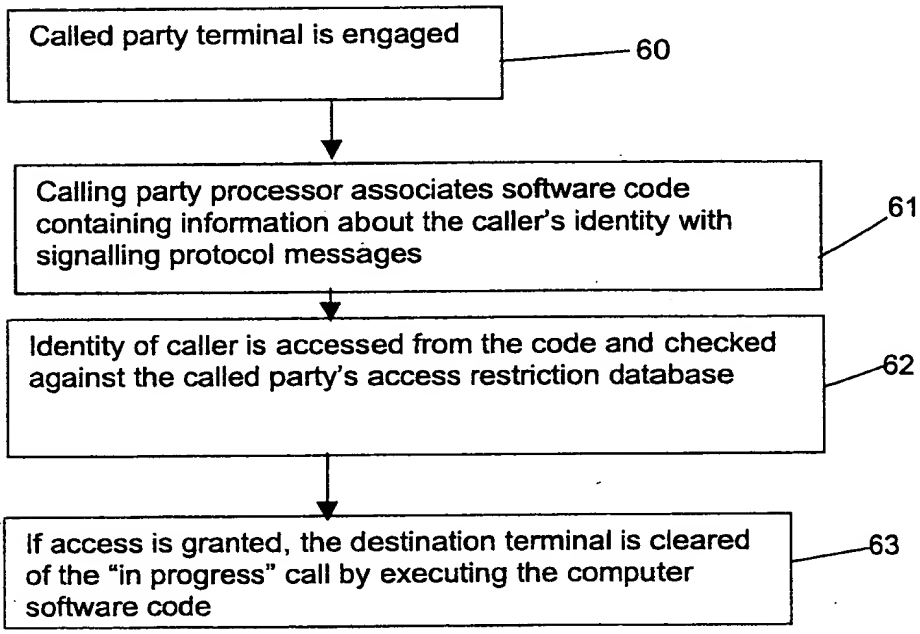



Figure 6

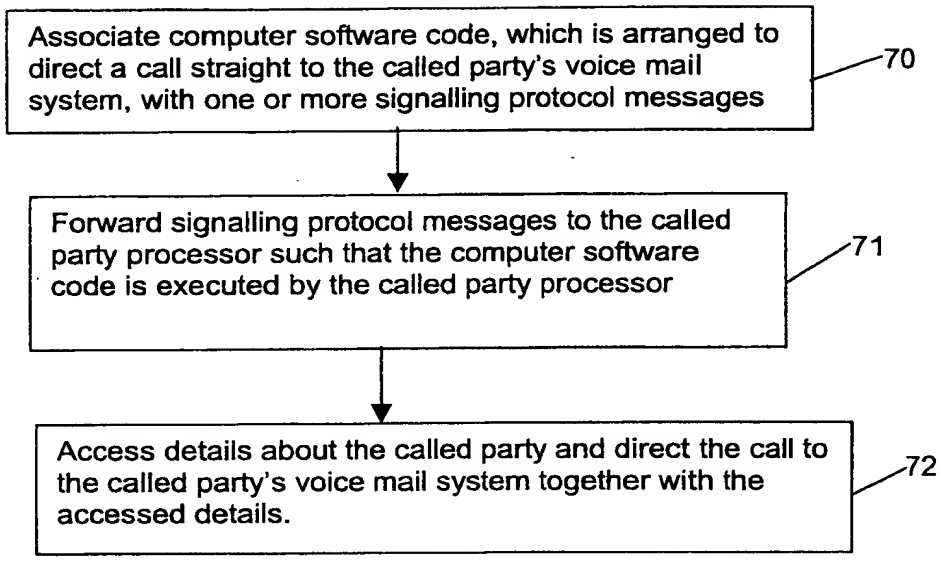



Figure 7

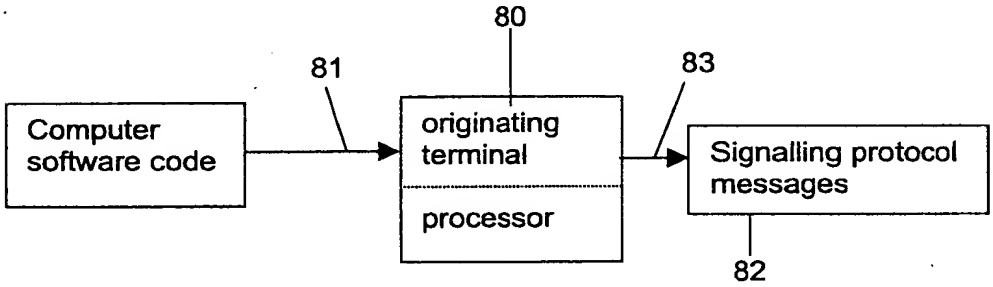
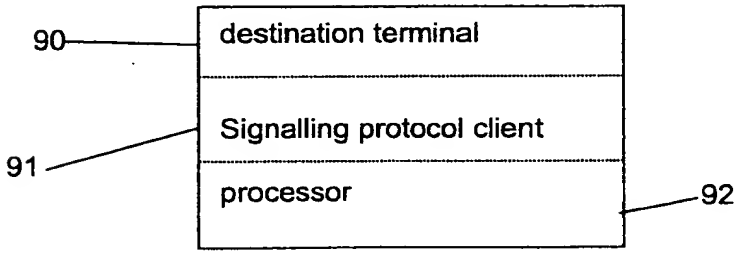



Figure 8

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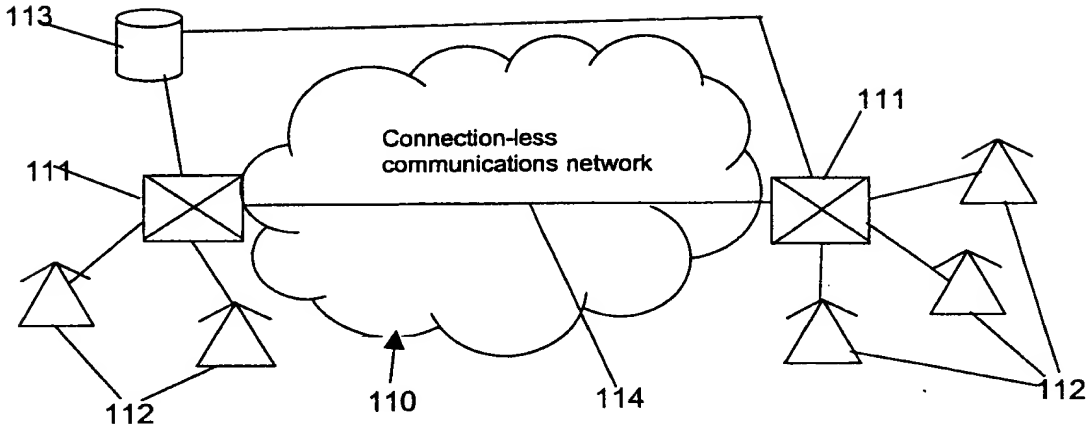


Figure 10

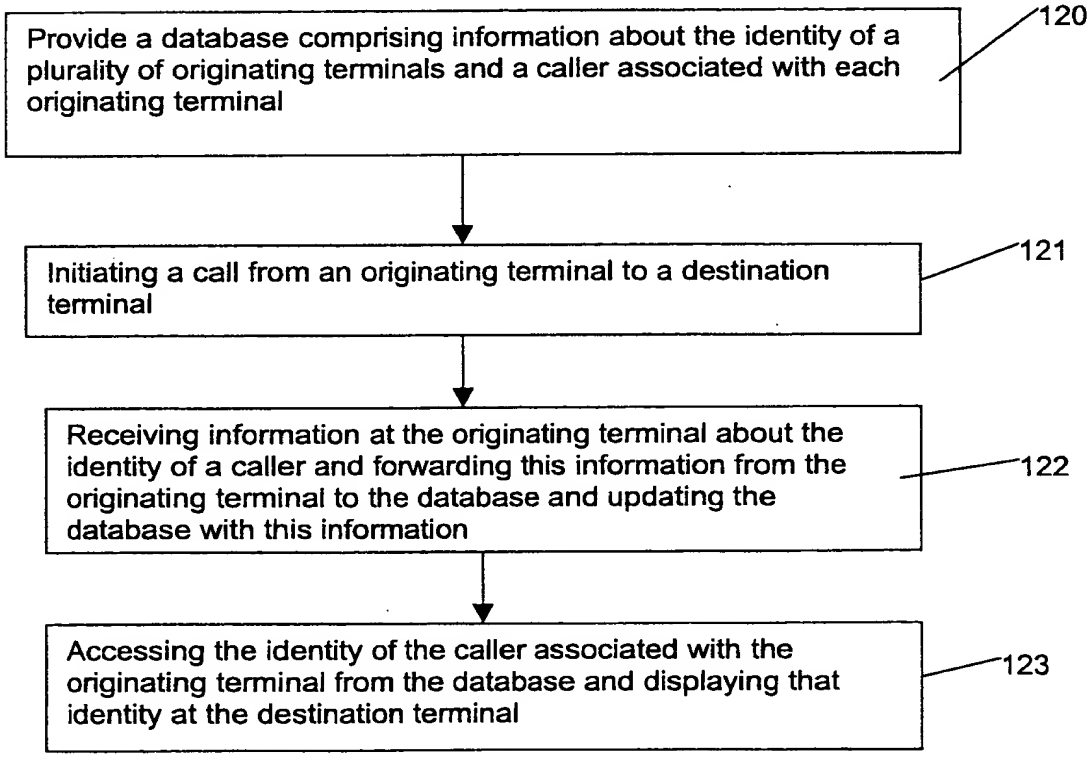


Figure 11

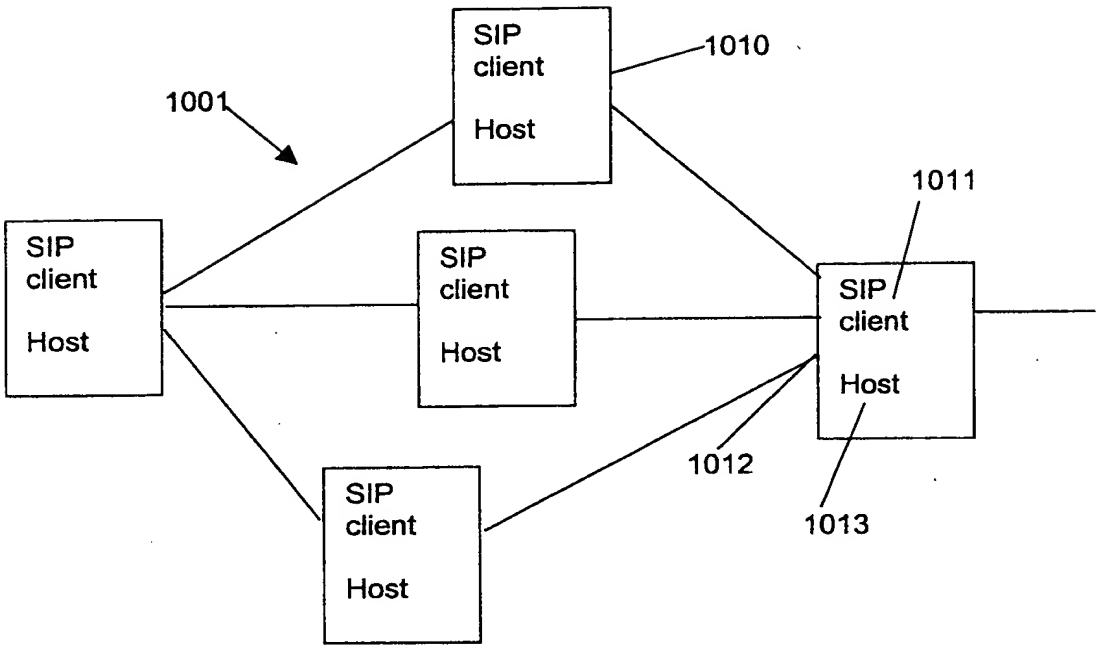


Figure 12

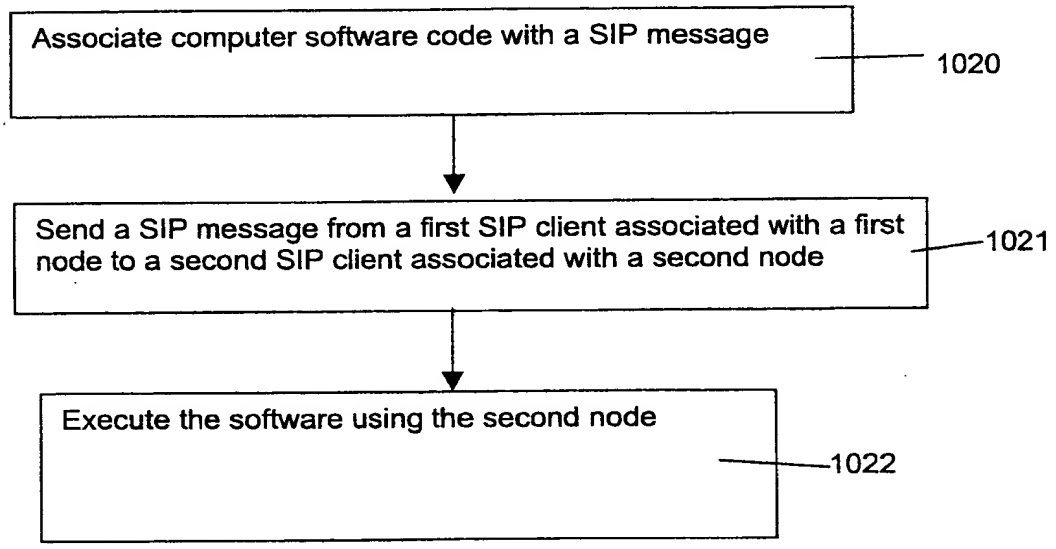


Figure 13

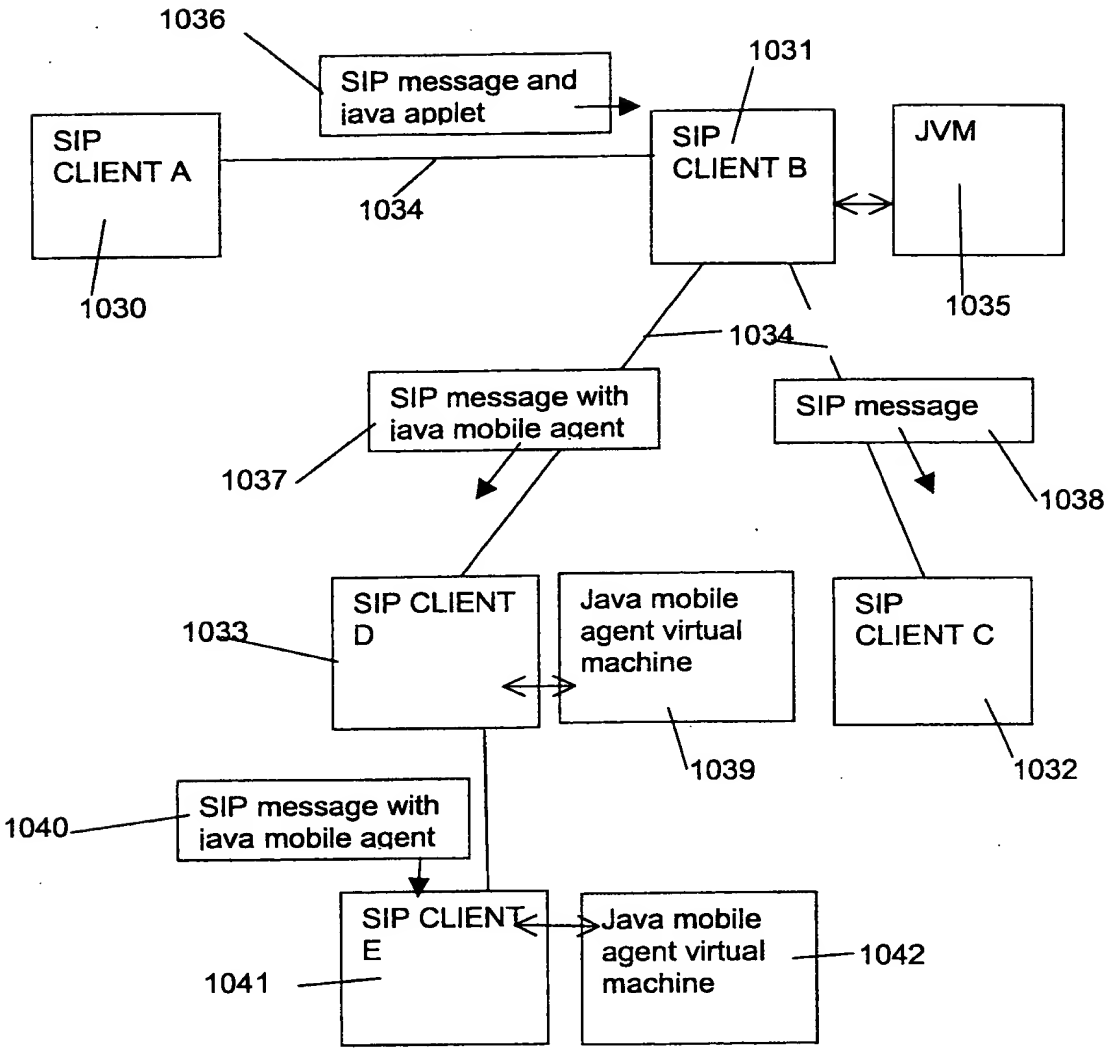
1036
SIP message and java applet
1031
SIP CLIENT A
SIP CLIENT B
JVM
1034
1030
1035
1034
SIP message with java mobile agent
SIP message
1037
1038
SIP CLIENT D
Java mobile agent virtual machine
SIP CLIENT C
1033
1039
1032
1040
SIP message with java mobile agent
SIP CLIENT E
Java mobile agent virtual machine
1042
1041

Figure 14

C ->S: INVITE sip:watson@boston.bell-tel.com SIP/2.0
Via: SIP/2.0/UDP kton.bell-tel.com>
From: A. Bell ,sip:a.g.bell@bell-tel.com>
To: T. Watson ,sip:watson@bell-tel.com.
Call-ID: 3298420296@kton.bell.tel.com
Cseq: 1 INVITE
Subject: Mr. Watson, come here.
Content-Type: multipart/mixed; boundary=3E4A567F4C8A
(or URL for java applet)
Content-Length: ...
Require: org.ietf.sip.java-enhanced-sip

(Within the message body)

--3E4A567F4C8A
Content-Type: application/x-sipjava
Content-Encoding: binary
Content-length: xxx
...Java applet or Java mobile agent for SIP message processing...
--3E4A567F4C8A—

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Figure 15

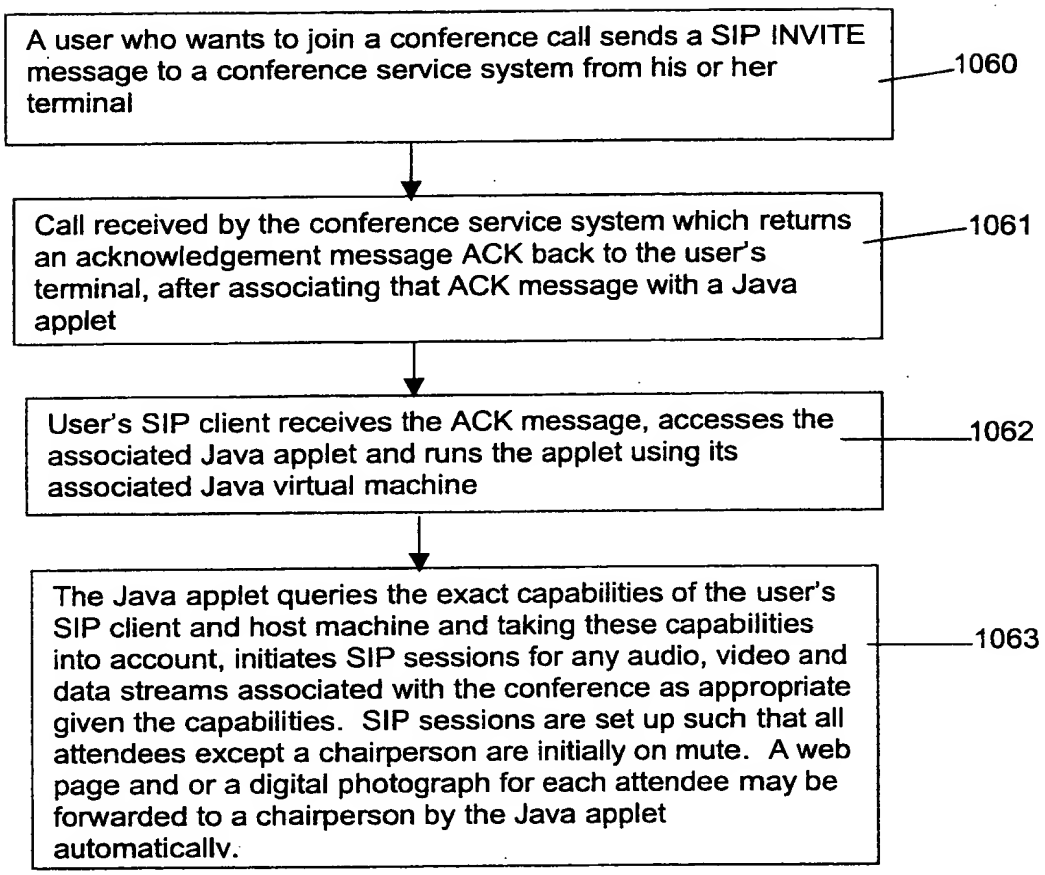


Figure 17

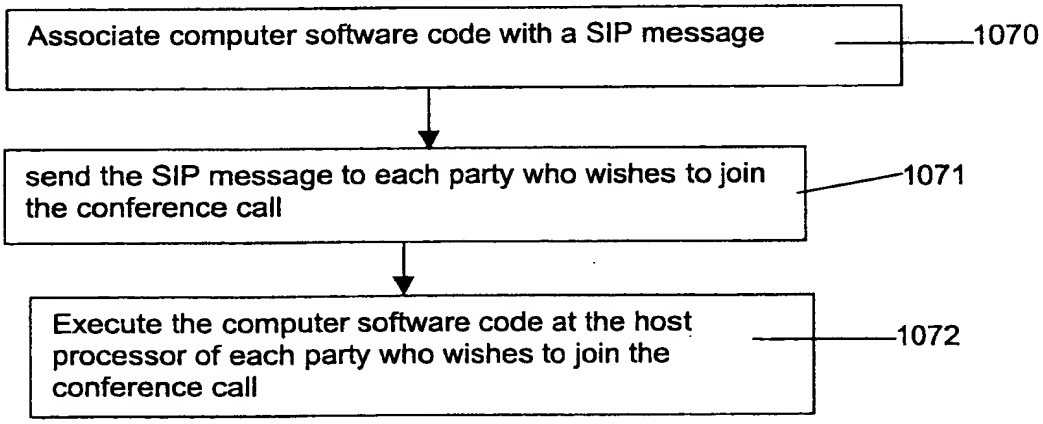


Figure 18

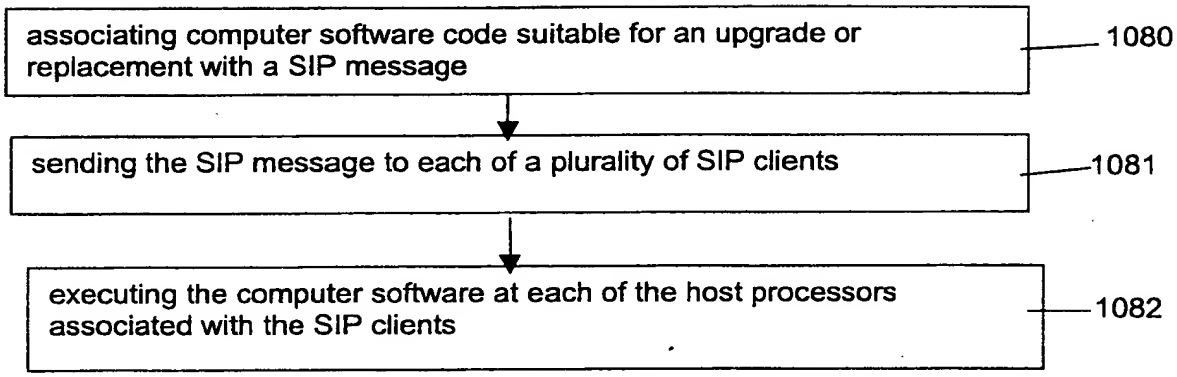


Figure 19

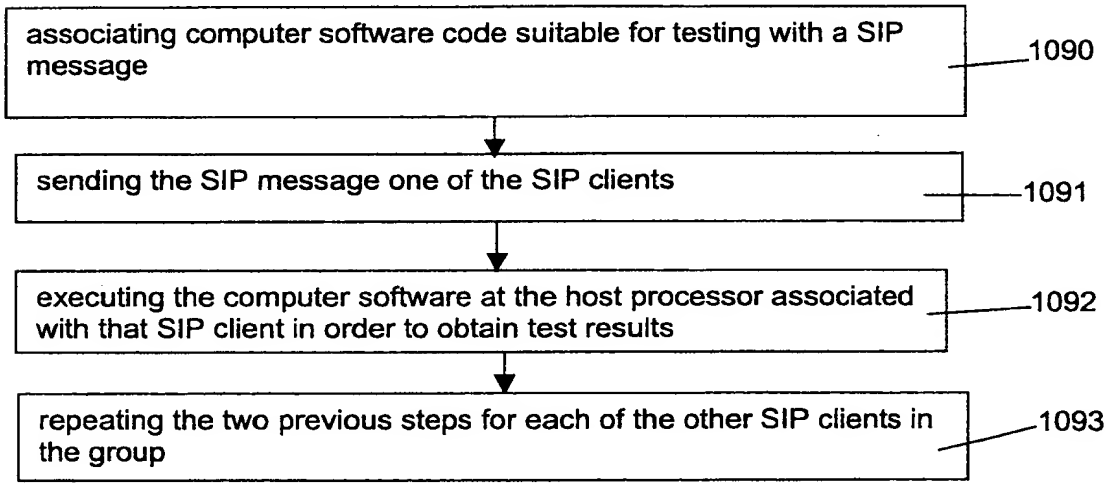


Figure 20

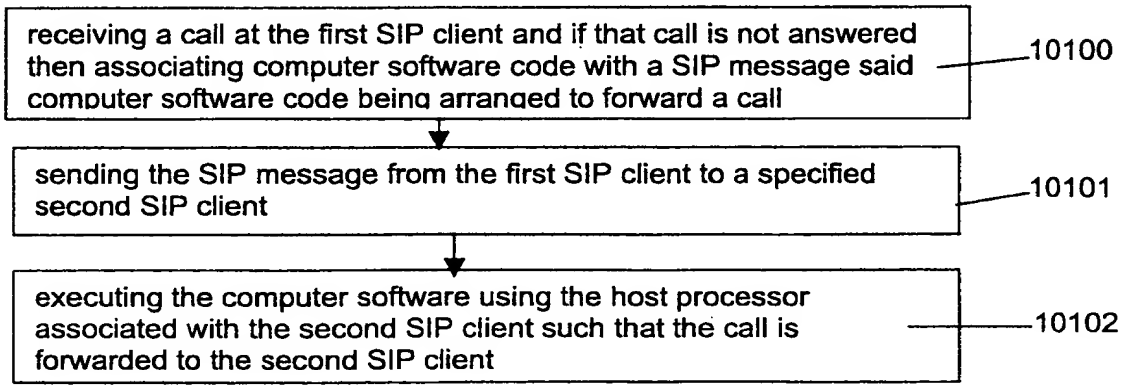


Figure 21

```
Request  =  Request-Line          ;
                *( general-header
                | request-header
                | entity-header )
               CRLF
               [ message-body ]   ;
```

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```
general-header   =  Accept                ;
                 |  Accept-Encoding       ;
                 |  Accept-Language       ;
                 |  Call-ID               ;
                 |  Contact               ;
                 |  CSeq                  ;
                 |  Date                  ;
                 |  Encryption            ;
                 |  Expires               ;
                 |  From                  ;
                 |  Record-Route          ;
                 |  Timestamp             ;
                 |  To                    ;
                 |  Via                   ;
```

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```
entity-header    =  Content-Encoding      ;
                 |  Content-Length        ;
                 |  Content-Type          ;  < ---- This will indicate that the
request-header   =  Authorization         ;        content type is a java applet
                 |  Contact               ;        or a Java Mobile Agent (or the
                 |  Hide                  ;        URL of a location of either
                 |  Max-Forwards          ;        from where they must be
                 |  Organization          ;        retrieved).
                 |  Priority              ;
                 |  Proxy-Authorization   ;
                 |  Proxy-Require         ;
                 |  Route                 ;
                 |  Require               ;  < ----- This will be used to indicate
                 |  Response-Key          ;         that Java-enhanced-SIP must
                 |                        ;
                 |  Subject               ;         be supported to process this
                 |  User-Agent            ;         message.
response-header  =  Allow                 ;
                 |  Proxy-Authenticate    ;
                 |  Retry-After           ;
                 |  Server                ;
                 |  Unsupported           ;
                 |  Warning               ;
                 |  WWW-Authenticate      ;
```

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FIGURE 16